RHODE ISLAND ALTERNATE ASSESSMENT

FREDRIK

GRADE 11 SCIENCE SAMPLE

SUMMER SCORING INSTITUTE 2009

Data Summary Sheet for Science
Inquiry Construct

Student: Scoscie, Fredrik **Grade:** 11

Science	**Structured Performance Task: 11-2** **Description:** Student will demonstrate the concept within a science investigation, which includes observing/questioning, planning, conducting and analyzing.				**Inquiry Construct Description:** Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis.							
	Domain: LS AAGSE# LS 1.1.1 Description: **Distinguish between living and non-living things.**				Domain: ESS AAGSE# ESS 2.1.1 Description: **Identify the major effects the sun has on the earth.**				Domain: PS AAGSE# PS 1.1.2b Description: Describe physical changes.			
	Collection Period 1 Oct. 6 - Nov. 16, 2008				**Collection Period 2 Jan. 12 - Feb. 6, 2009**				**Collection Period 3 March 16 - April 9, 2009**			
Date	10/15/08	10/20/08	10/23/08		01/16/09	01/23/09	02/02/09		03/17/09	03/26/09	04/08/09	
Data Type	DP	DP	SDF		DP	DP	SDF		SDF	DP	DP	
Accuracy %	100	80	100		100	100	100		100	95	100	
Independence %	80	90	55		100	80	50		75	90	100	
Levels of Assistance				**Average**				**Average**				**Average**
verbal **Prompt %**	0	0	45	15	0	20	50	23	0	10	0	3
gestural **Prompt %**	20	10	0	10	0	0	0	0	25	0	0	8
Prompt %	0	0	0	0	0	0	0	0	0	0	0	0
Average % for Collection Period	Accuracy: 93 Independence: 75				Accuracy: 100 Independence: 77				Accuracy: 98 Independence: 88			

Student Documentation Form for Science Inquiry Construct

☐ Check box if Student Product or Photograph Evidence Documentation form is attached.

Student: Scoscie, Fredrik	**Grade:** 11	**Date:** 10/23/08	**Data Collection Period: 1**
Science Domain: LS **Structured Performance Task (SPT)#:** 11-2 **Description:** Student will demonstrate the concept within a science investigation, which includes observing/questioning, planning, conducting and analyzing.		**Inquiry Construct Description** Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis. **WITHIN AAGSE#** LS 1.1.1 **Description: Distinguish between living and non-living things.**	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

The class is currently working on a unit on determining if something is a living or non-living thing. The students participated in the science investigation as follows: Students researched the characteristics of living things (grow, move, and reproduce), and non-living things by looking on the internet. The students observed photos of 5 objects on a website and discussed the characteristics they observed. Based on what they learned through their research, the students planned the objects/photos of objects they would test and developed a chart to record if an object grows, moves, and reproduces. Students did the experiments on their objects with a lab partner; using manipulative cards and then converting these into a Lab Report Data sheet. After the lab was completed, the students analyzed their findings and discussed their reasoning for charting the object as living or non-living. After completing the experiment, the students concluded if their hypothesis was correct or incorrect by reviewing their hypothesis chart and marking whether their theory was correct or not correct based on their evidence.

Describe the student's application of the assessed Inquiry Construct within the science investigation:

Fredrik had nine objects to investigate and he used the data on his chart to determine if his hypothesis on whether the object was living/non-living was correct. He recorded whether or not the object could grow, move, and reproduce on his chart. Based on this data he determined if the object was living or non-living.

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik was given 9 objects to investigate, and was accurate in using his evidence to determine whether his hypothesis was correct in each of the 9 objects, giving 100% accuracy.

Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.

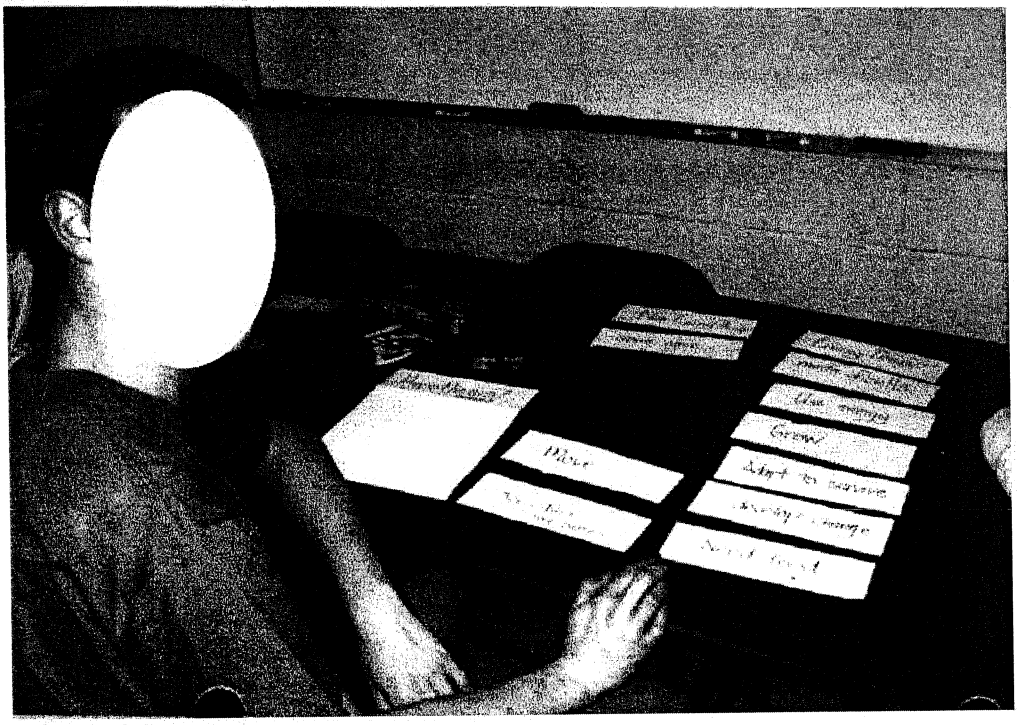
Fredrik needed verbal prompts to use evidence to assist with determining correctness of his hypothesis for 4 objects (45%) and was independent in 5 objects (55%).

Level of Accuracy: 100 %

Level of Independence: 55 %

Teacher Initials AO

RIAA Photo Evidence Documentation
Inquiry



Explain the student's participation in applying the AAGSE.

Fredrik is using his evidence (the charts he completed during conducting) to determine whether his hypothesis (the paper on the left) was correct on whether his objects are living or non-living. He needed verbal prompts for using his evidence to determine if his hypothesis was correct for 4 objects but was independent in 5 objects.

Student Name: Fredrik

Date: 10/23

SPT #: LS: 11-2

AAGSE: LS 1.1.1
Distinguish between living and non-living things

Teacher Initials: SD

Student Documentation Form for Science
Inquiry Construct

☐ Check box if Student Product or Photograph Evidence Documentation form is attached.

Student: Scoscie, Fredrik	**Grade:** 11	**Date:** 02/02/09	**Data Collection Period: 2**
Science Domain: ESS **Structured Performance Task (SPT)#:** 11-2 **Description:** Student will demonstrate the concept within a science investigation, which includes observing/questioning, planning, conducting and analyzing.		**Inquiry Construct Description** Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis. **WITHIN AAGSE#** ESS 2.1.1 **Description: Identify the major effects the sun has on the earth.**	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

Fredrik's class is involved in a science class within his school community. The class is working on The Greenhouse Effect, key principles, and vocabulary. The students participated in the science investigation as follows: As part of this experiment, the students observed a greenhouse and discussed how the sun affected the greenhouse. To learn about the effects of the greenhouse, the students planned to make a small greenhouse with a box, determined where to put their box greenhouse, and how they would record their data. Students made 2 greenhouses each and recorded the data from each greenhouse (placed side by side). Students were given a chart to record their temperature data in the classroom and in their greenhouse, and whether the sun was out every day. After the experiment was completed, the students analyzed the results of their findings. The students examined the relationship between the increase of the average daily temperature and the increase in the temperature in their simulated greenhouse (convection).

Describe the student's application of the assessed Inquiry Construct within the science investigation:

Fredrik made a hypothesis about the greenhouses – he thought that the sun would make the greenhouse temperature warmer, and when the sun was not out, the greenhouse temperature would be cooler. After the experiment, Fredrik was evaluated on his ability to use his chart evidence to refute/support his hypothesis using the data from each of his two greenhouses.

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik looked at the data he collected and drew a conclusion that his hypothesis was incorrect for both of his greenhouse's data--the temperature stayed warm in the greenhouses even when the sun was not out. Even though his hypothesis was incorrect, he accurately used his data to refute his hypothesis, resulting in 100% accuracy in using his data.

Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik required the following levels of assistance to use this evidence: he was independent in using the data from one greenhouse and needed verbal prompting for the other greenhouse. His level of independence was 50%.

Level of Accuracy: 100 %

Level of Independence: 50 %

Teacher Initials AD

Student Documentation Form for Science Inquiry Construct

☐ Check box if Student Product or Photograph Evidence Documentation form is attached.

Student: Scoscie, Fredrik	**Grade:** 11	**Date:** 03/17/09	**Data Collection Period: 3**
Science Domain: PS **Structured Performance Task (SPT)#:** 11-2 **Description:** Student will demonstrate the concept within a science investigation, which includes observing/questioning, planning, conducting and analyzing.		**Inquiry Construct Description** Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis. **WITHIN AAGSE#** PS 1.1.2b **Description:** Describe physical changes.	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

The class is conducting a science investigation on physical changes that occur to paper as part of an investigation on chromatography. The students participated in the science investigation as follows: OBSERVE/QUESTION: Students listened to a lecture given by the science teacher about chromatography. After the lecture the students discussed what they thought might happen when the paper hits the water and developed the hypothesis: The paper will turn all one color. PLAN: The students planned the tools and materials they will need to complete the experiment. Some items include chromatography paper, water, bin, and colored water. CONDUCT: The students conducted the experiment and recorded the changes that they saw using a table format. They described the physical changes they observed. ANALYZE: After the experiment was completed, the students reviewed, discussed, and analyzed the results of their findings to determine what changes they saw.

Describe the student's application of the assessed Inquiry Construct within the science investigation:

Fredrik was evaluated on his use of his data (evidence) to support whether his hypothesis was correct. Fredrik hypothesized that the paper would change all one color. Based on the data, Fredrik concluded that the paper did change during the experiment, but did not change to all one color.

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik looked at the data he collected and drew a conclusion that his hypothesis was incorrect since the paper showed more than one color. Fredrik accurately used his data to prove his hypothesis wrong, resulting in 100% accuracy in using his data.

Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik required a gestural prompt to use his evidence in one out of four paper changes, but was independent in three out of four opportunities to use his evidence to disprove his hypothesis.

Level of Accuracy: 100 %

Level of Independence: 75 %

Teacher Initials AD

Data Summary Sheet for Science Knowledge Entry

Student: Scoscie, Fredrik **Grade:** 11

Science	**Structured Performance Task#: 11-2** **Description:** Student will demonstrate the concept within a science investigation, which includes observing/questioning, planning, conducting and analyzing.						**Inquiry Construct:** Use evidence to support and/or justify interpretations and/or conclusions or explain how the evidence refutes the hypothesis.		
	Domain: LS AAGSE# LS 1.1.1 Description: **Distinguish between living and non-living things.**			Domain: ESS AAGSE# ESS 2.1.1 Description: **Identify the major effects the sun has on the earth.**			Domain: PS AAGSE# PS 1.1.2b Description: Describe physical changes.		
	Collection Period 1 Oct. 6 - Nov. 14, 2008			**Collection Period 2 Jan. 12 - Feb. 6, 2009**			**Collection Period 3 March 16 - April 9, 2009**		
Date	10/14/08	10/24/08	11/10/08	01/14/09	01/26/09	02/05/09	03/20/09	03/27/09	04/09/09
Data Type	DP	SDF	DP	DP	DP	SDF	SDF	DP	DP
Accuracy %	75	100	86	85	85	100	100	100	100
Independence %	75	80	0	85	85	80	50	100	100
Average % for Collection Period	Accuracy: 87 Independence: 52			Accuracy: 90 Independence: 83			Accuracy: 100 Independence: 83		

Average % across all three collection periods:	Accuracy: 92 Independence: 73

Student Documentation Form for Science Knowledge Entry

☐ Check box if Student Product or Photograph Evidence Documentation form is attached.

Student: Scoscie, Fredrik	**Grade:** 11	**Date:** 10/24/08	**Data Collection Period: 1**
Science Domain: LS **Structured Performance Task (SPT)#:** 11-2 **Description:** Student will demonstrate the concept within a science investigation, which includes observing/questioning, planning, conducting and analyzing.		**WITHIN AAGSE#** LS 1.1.1 **Description: Distinguish between living and non-living things.**	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

The class is currently working on a unit on determining if something is a living or non-living thing. The students participated in the science investigation as follows: Students researched the characteristics of living things (grow, move, and reproduce), and non-living things by looking on the internet. The students observed photos of 5 objects on a website and discussed the characteristics they observed. Based on what they learned through their research, the students planned the objects/photos of objects they would test and developed a chart to record if an object grows, moves, and reproduces. Students did the experiments on their objects with a lab partner; using manipulative cards and then converting these into a Lab Report Data sheet. After the lab was completed, the students analyzed their findings and discussed their reasoning for charting the object as living or non-living. After completing the experiment, the students concluded if their hypothesis was correct or incorrect by reviewing their hypothesis chart and marking whether their theory was correct or not correct based on their evidence.

Describe the student's application of the assessed AAGSE within the SPT/science investigation:

Fredrik demonstrated his ability to distinguish between living and non-living things through completion of his Lab Report. Fredrik had to use his data on whether or not an object could, grow, move and reproduce to determine whether or not an object was a living thing or a non-living thing.

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.

There were 10 opportunities to evaluate Fredrik's ability to distinguish between living and non-living things. Fredrik correctly identified either living or non-living in 10/10 opportunities, yielding a 100% accuracy.

Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik was independent in distinguishing between living and non-living things in 8/10 opportunities for an independence score of 80%.

Level of Accuracy: 100 %

Level of Independence: 80 %

Teacher Initials AO

Name Fredrik Date 10/24

Living/Non-Living
Lab Report Data

Object	Grow	Move	Reproduce	Living	Non-Living	
Pencil					✓	C I
Rock		✓			✓	C I
Mouse	✓	✓	✓	✓		C I
Ruler					✓	C I
Dog	✓	✓	✓	✓		C I
Cat	✓	✓	✓	✓		C I
Car		✓			✓	C (✓)
Bird	✓	✓	✓	✓		C I
Stuffed Bear		✓			✓	C (✓)
Calculator		✓			✓	C I
						I = 8/10
						V = 2/10

10

Student Documentation Form for Science Knowledge Entry

☐ Check box if Student Product or Photograph Evidence Documentation form is attached.

Student: Scoscie, Fredrik	**Grade:** 11	**Date:** 02/05/09	**Data Collection Period: 2**
Science Domain: ESS **Structured Performance Task (SPT)#:** 11-2 **Description:** Student will demonstrate the concept within a science investigation, which includes observing/questioning, planning, conducting and analyzing.		**WITHIN AAGSE#** ESS 2.1.1 **Description: Identify the major effects the sun has on the earth.**	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

Fredrik's class is involved in a science class within his school community. The class is working on The Greenhouse Effect, key principles, and vocabulary. The students participated in the science investigation as follows: As part of this experiment, the students observed a greenhouse and discussed how the sun affected the greenhouse. To learn about the effects of the greenhouse, the students planned to make a small greenhouse with a box, determined where to put their box greenhouse, and how they would record their data. Students made 2 greenhouses each and recorded the data from each greenhouse (placed side by side). Students were given a chart to record their temperature data in the classroom and in their greenhouse, and whether the sun was out every day. After the experiment was completed, the students analyzed the results of their findings. The students examined the relationship between the increase of the average daily temperature and the increase in the temperature in their simulated greenhouse (convection).

Describe the student's application of the assessed AAGSE within the SPT/science investigation:

Fredrik completed a lab report in which he answered 5 questions about the effect of the sun on the earth (example: Does the sun make the earth warmer or colder?").

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik completed his lab report by correctly answering 5 questions related to the effects of the sun on the earth, yielding 100% accuracy.

Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik independently answered 4/5 questions on the effects of the sun, but needed a verbal prompt on one question, yielding 80% independence.

Level of Accuracy: 100 %

Level of Independence: 80 %

Teacher Initials AD

Student Documentation Form for Science Knowledge Entry

☐Check box if Student Product or Photograph Evidence Documentation form is attached.

Student: Scoscie, Fredrik	**Grade:** 11	**Date:** 03/20/09	**Data Collection Period: 3**
Science Domain: PS **Structured Performance Task (SPT)#:** 11-2 **Description:** Student will demonstrate the concept within a science investigation, which includes observing/questioning, planning, conducting and analyzing.		**WITHIN AAGSE#** PS 1.1.2b **Description:** Describe physical changes.	

Describe the four components of the SPT/science investigation (observe/question, plan, conduct, and analyze) as they are embedded in the instruction of the AAGSE:

The class is conducting a science investigation on physical changes that occur to paper as part of an investigation on chromatography. The students participated in the science investigation as follows: OBSERVE/QUESTION: Students listened to a lecture given by the science teacher about chromatography. After the lecture the students discussed what they thought might happen when the paper hits the water and developed the hypothesis: The paper will turn all one color. PLAN: The students planned the tools and materials they will need to complete the experiment. Some items include chromatography paper, water, bin, and colored water. CONDUCT: The students conducted the experiment and recorded the changes that they saw using a table format. They described the physical changes they observed. ANALYZE: After the experiment was completed, the students reviewed, discussed, and analyzed the results of their findings to determine what changes they saw.

Describe the student's application of the assessed AAGSE within the SPT/science investigation:

While conducting the experiment, Fredrik had to record the changes observed to the paper. Fredrik had 4 opportunities to describe whether or not there was a change (one for each of his lab partner's papers).

Evaluation of Student's Performance

Evaluate the student's accuracy performance on the Inquiry Construct. Explain how percentages were determined.

Fredrik correctly described the changes in the paper in 4 of 4 opportunities, yielding 100%.

Evaluate the student's independence performance on the Inquiry Construct. Explain how percentages were determined.

Fredrick independently described the paper changes in 2 of 4 opportunities, and needed a verbal prompt to describe the changes in 2 of 4 opportunities. His independence was 50%.

Level of Accuracy: 100 %

Level of Independence: 50 %

Teacher Initials AO